

# The "Interviewer-Effect" in Public Opinion and Market Research Surveys

BY  
ALFRED B. UDOW, PH.D.

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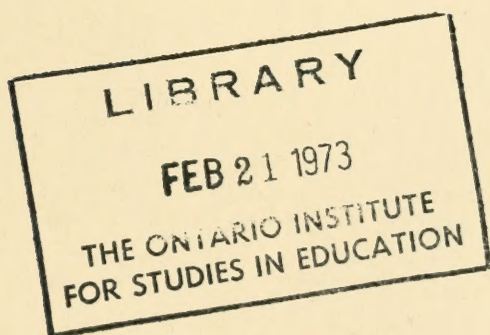
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## CONTENTS

CHAPTER	PAGE
I. BELIEF IN THE EXISTENCE OF INTERVIEWER-BIAS .....	7
II. METHOD OF THE STUDY .....	12
III. RESULTS .....	21
IV. SUMMARY AND CONCLUSIONS .....	31
BIBLIOGRAPHY .....	34
APPENDIX .....	35





## CHAPTER I

### BELIEF IN THE EXISTENCE OF INTERVIEWER-BIAS

It is the belief of many people who work in the field of public opinion polls and market research surveys that the interviewers who are used in the studies have an important effect on the results they obtain. This effect is most frequently referred to as "interviewer-bias." Since the term *bias* might be considered as indicating an intentional effect, that term is avoided here, and is replaced by the non-committal *effect*.

Whether or not the interviewer-effect is intentional, its presence would be far-reaching and its detection and understanding would be important. Although there has been no unequivocal evidence that demonstrates the existence of the effect many of the men who are concerned with the administration of straw ballot procedures take its existence for granted, and, without claiming to understand it, endeavor to avoid it.

A number of writers have ventured opinions about interviewing technique in general and the interviewer-effect in particular. Typical of this type of article is one by Wechsler (11), appearing in 1940, in which he states that the interviewer's place may be more important than any other aspect of the public opinion-measuring process. He points out that interviewers may differ in understanding their function when respondents do not know what the interviewer is talking about. The interviewer may consider that part of his task is the explanation of his question-matter, or, on the other hand, that he is required simply to obtain a record of the extent of popular interest and feeling regardless of areas of ignorance and half-knowledge. Wechsler reports that people seem to avoid giving the *Don't Know* reply and will often venture opinions on topics far beyond their understanding. Some interviewers, therefore, may prompt their respondents. This forcing of opinion might be in the direction of the interviewer's own opinion. But even if he follows instructions and reads the questions verbatim, without adding a single word, the tone of voice used by him may suggest an answer. This effect, Wechsler suggests, might be more striking in war-time, when feelings on some issues run high.

Tryon (10) in 1941, in a paper presented to a meeting of the Western Psychological Association, stressed the importance of dis-

covering the prestige and social effects of poller on pollee, when both live in the same community and when the ballot is open. Here, Tryon believes, will be found the basis for errors in the Gallup election polls.

In this connection, it might be noted that Dr. Gallup himself raised the question of standardized tests for checking on the interviewer during one of the round table discussions at meetings held to celebrate the twentieth anniversary of the founding of the Psychological Corporation (12). In reply, Dr. Frank Stanton discussed the importance of the problem and described his own experiment (*vide infra*). Dr. Henry Link of the Psychological Corporation explained that that organization attempts to surmount difficulties inherent in interviewer-effect by using many interviewers, each of whom do rather few interviews.

Blankenship (3) holds that the problem of interviewing is "one of the greatest questions of the entire procedure." He regards as extremely important "the possible influence of interviewer-bias in the results obtained by the experienced and trained investigator."

Of the actual research done in this field, almost all has been done in the laboratory or has dealt with the social workers' type of interview.

For example, Clark (4) in 1927 used two college students as interviewers and 193 freshmen as interviewees, the task being to determine the amount of time spent in various activities such as athletics, eating, social affairs, etc., etc. He found significant differences between the two interviewers in the time reported as having been spent in different activities. Clark explains these differences in several ways. Apparently the interviewers did not have in mind precisely the same definitions of the different items. Prompting, too, seemed to play a part and suggestions on the part of his interviewers are considered by Clark as being "well-nigh unavoidable." Such prompting was most often done to stimulate responses which were slow in coming. Finally, Clark reports that the two sets of data were different "because of the preconceived notion of the interviewers." For example, one interviewer was athletically inclined; he found more time spent in athletics than did the other interviewer. Clark concludes that his study demonstrates "the necessity of taking into consideration the influence of the interviewer on the data obtained."

What might be regarded as the classic paper in this field was published by Rice (8) in 1929 and consists of an analysis of some



data obtained in 1914. Rice assumes that "contagious bias," or selective interests, are present in both interviewer and respondent. To investigate this hypothesis he analyzed the data gathered when 2,000 homeless men were studied for their physical, mental, and social characteristics. These data had been collected by 12 "skilled" investigators who had been assembled from among the male staffs of several social agencies. Each applicant was separately interviewed by one of the investigators, in an interview which lasted from 20 to 30 minutes. The assignment of applicants to interviewers was random. A four-page schedule composed of questions relating to the social and industrial history was filled out in the case of each applicant. Some years later Rice had occasion to study the data and became curious about the presence of certain uniform types of answers in the records of men interviewed by certain of the investigators. The questionnaire had provided for a statement of the applicant's own explanation of his destitution as well as for the investigator's explanation. Rice tabulated the replies obtained by two of the investigators, classifying the reasons given as either "liquor" or "industrial" (*i.e.*, applicant's dependency was due to some industrial situation for which he was not individually responsible, *e.g.*, "layoff," "seasonal work," "shut-down of plant," etc.). Investigator A reported that in a preponderance of cases liquor had been the cause of the difficulties. Furthermore, fully one-third of the men he interviewed had themselves ascribed their destitution to liquor. Investigator B, on the other hand, found that the primary cause for dependency in his cases could be traced back to industrial factors, and according to his report, he found that a mere one-tenth of the men named liquor as the cause of their downfall, while three-fifths laid the blame on industrial factors. Since the two interviewers had been questioning the same type of man, chosen at random from the group, these differences struck Rice as being surprising. Upon inquiry he found that Investigator A was an ardent believer in prohibition, while Investigator B was regarded by his associates as a Socialist.

It was not until eleven years later, in 1940, that another article in this field was published. Blankenship (2) at this time presented a reanalysis of some material published earlier the same year (1), reporting an experiment in which 10 interviewers obtained 300 interviews each, on a questionnaire dealing with elections that were about to be held in the area in which the opinion poll was conducted. These "experienced" interviewers had all answered the question-



naire before beginning the study. In the reanalysis he compared the personal answers of 3 interviewers with the answers they brought back for their respondents. While the results secured by the different interviewers were found to be essentially the same, there were 7 out of 31 cases where real differences existed and in 3 of these cases there was a positive correlation between the interviewers' opinions and the data they secured. This led Blankenship to conclude that "The work certainly indicates the need for a research upon the possible influence the interviewer may have on the respondent's answers." His own study was far from conclusive, nor was it meant to be, since it was set up to investigate an entirely different problem.

In 1941, Katz (6) conducted a study intended to investigate one aspect of the problem. His survey was done with the cooperation of Gallup's American Institute of Public Opinion. Katz set out to discover the effect of the social status of the interviewer on the answers he brought back. For the purpose he used two groups of interviewers. One group was composed of five of Gallup's regular white-collar workers, together with four similar individuals who had applied for work with Gallup. The "working-class" staff was composed of 11 individuals, described by Katz as "wage workers, some of them mill hands, and most of them with no college training." These two groups were sent into the same low-rental areas of Pittsburgh with identical instructions and questionnaires. Katz's results indicate differences between the groups in the selection of respondents. Furthermore, there were differences in the data brought back in respect to attitudes of conservatism, labor issues, union problems, and isolationism.

Recently Stanton and Baker (9) have published the results of a laboratory experiment conducted 8 years ago (1934) at the Ohio State University. A learning task was provided, consisting of the presentation on a screen of 12 geometrical forms (nonsense figures), one at a time, to 200 undergraduate students. Five days later, and again two weeks later the subjects were interviewed in the laboratory.

The researchers secured the services of three men and two women who are described as "experienced interviewers, having had at least one year's experience in the conduct of market surveys, and public opinion polls." They were kept in ignorance of the true purpose of the experiment, but in their instructions they were warned to maintain a strictly objective and unbiased attitude in the interview.

The interviews were conducted individually. Each interviewer had before him a record sheet giving the "correct" answers. The subject was shown a duplicate of each of the original figures together with its mirror image. The interviewers recorded the statement of the subject as to which of each pair he had seen in the original presentation. In a carefully balanced arrangement, some of the "correct" answers provided for the interviewers were incorrect. The bias in this study, then, was simply the interviewers' predetermined set as to which of each pair of figures had actually been exposed originally.

Stanton and Baker found that this bias on the part of the interviewer did have an effect in the personal interview even though the interviewer was aware of the bias and had been carefully warned to guard against it. The effect of the bias was found to be greater on material that had been incompletely learned or remembered. The data, however, do not justify a conclusion regarding individual differences in the effect of bias among experienced interviewers.

The authors suggest that minimal cues and errors in recording may be assumed to account for most of the effect.

#### THE PROBLEM INVESTIGATED

This study was set up to determine the existence of the interviewer-effect in public opinion polls and market research surveys. If the effect were found, the intention was to outline a procedure to study and eliminate it.

## CHAPTER II

### METHOD OF THE STUDY

The general procedure adopted for this study was to conduct a well-controlled poll which had the features representative of both a public opinion and a market research survey. One exception to the usual technique was that in this study the opinions of the interviewers on the questions they were to ask in the field were determined in advance. A second exception was the use of two surveys, the first with no instructions whatever as to commercial sponsorship, the second, with definite (false) information concerning the sponsor.

To fulfill the requirements set up by the nature of the project, a questionnaire was especially devised. Since both public opinion and market research surveys were under consideration, both types of questions were included; the first 4 were of the public opinion type, the remaining 4 required brand names as answers and were of the market research type. Question 1 was included as a "buffer" question, in accordance with the usual practice in this work. Question 2 was intended to continue the trend of thought established in Question 1, but in addition to deal with a problem of current significance. This led quite naturally to a question (Number 3) dealing with another aspect of war-time America, namely the sugar-rationing situation which had just confronted the residents of this country. A question concerning rationing suggested immediately one relating to metal salvage (Number 4).

Following naturally after such a question were the remaining four questions dealing with dentifrices. Use of this product in the survey had two other advantages. Dentifrices are widely sold in this country, and while people do have preferences among the many dentifrices on the market, most individuals are prepared to change brands fairly readily. Therefore, it was felt, an interviewer-effect might best be manifested in connection with such a mutable preference.

Question 5 was intended to be a record of the brand names that had impressed themselves on the respondents. In such a question, concerned with partial memory, interviewer-effect would have minimal difficulty in operating. The first advertising slogan of Question 6 is that of Ipana toothpaste, the second, of Dr. Lyon's toothpowder, and the third, of Forhan's toothpaste. The first and third are the brand names used critically later in the study. These particular



dentifrices were chosen because of the fact that their names and slogans have long been heavily advertised. Furthermore, Ipana is representative of the most popular dentifrices, while Forhan's is one of the least widely used nationally advertised toothpastes. The Dr. Lyon's slogan was used as a form of control. Questions 7 and 8 were intended to supplement one another. If no interviewer-effect were found in Question 7 (and it was not expected that many respondents would report *using* a dentifrice for which the interviewer had a bias), it was considered that the bias might exhibit itself in the answer to Question 8. The answer to Question 7, however, had to be known in order to permit the interpretation of the results obtained for Question 8, in the event that an interviewer-effect was found.

At the bottom of the Questionnaire forms, blanks were provided for the interviewer to record the following facts about the respondents: socio-economic level, estimated age, sex, marital status, specific occupation. (If the respondent was not working the interviewer was to record the occupation of the head of the family.) Finally, the interviewer was to record the place of the interview, and sign his name. Each questionnaire was numbered by machine to provide a code record which indicated when the interview was obtained, and by whom. The questionnaire read as follows:

1. Have you gone to the movies this week? Yes—No—  
(If yes) How often?—  
(If no) Would you have gone if you had the time? Yes—No—DK—
2. Do you enjoy war stories in the movies? Yes—No—DK—  
(If yes) Would you like to see more of them? Yes—No—DK—  
(If no) Do you like to see newsreels dealing with the war? Yes—No—DK—
3. Do you feel that one-half a pound of sugar a week is sufficient for your needs? Yes—No—DK—  
Do you think that rationing is a satisfactory method for controlling sugar distribution? Yes—No—DK—
4. Do you feel that turning in old toothpaste tubes when you buy toothpaste is an important contribution to wartime metal salvage? Yes—No—DK—
5. What brand of toothpaste or toothpowder or liquid dentifrice have you seen or heard advertised lately? Brands—
6. What brand of dentifrice advertises "For the smile of beauty..."? —  
What brand of dentifrice advertises "Do as your dentist does..."? —  
What brand of dentifrice advertises "... 4 out of 5 may get it..."? —
7. What brand of dentifrice do you use? —
8. If your favorite brand of dentifrice were all sold out what brand would you buy instead? —

A—  
B—

Estimated age

Specific occupation

C——	Man——	(If respondent is not
D——	Woman——	working, get occupation
OR-wh——	Married——	of head of family.)
Cl——	Single——	Place ——
OR-cl——		
Interviewer's Name ——		

*The subjects in this study were the interviewers.* The people interviewed (respondents) were not the subjects of study, nor were their opinions of primary interest here. Therefore, the selection of interviewers was of utmost importance.

On the basis of the experience of individuals who have long worked in this field, it was predicted that inexperienced interviewers would provide results of doubtful significance in a study of this type. If the interviewer-effect is observed in the case of untrained interviewers, it can be argued that this is simply a function of their lack of training. Hence it was deemed necessary for the purpose of this investigation to use people who were typical, experienced, trained, professional interviewers; these requirements were fulfilled by the interviewers whose services were secured. It was advisable to have them typical in order to duplicate actual field conditions as closely as possible; experienced, so that problems of self-confidence, rapport and so on, would not arise; trained, so that each interviewer's approach to the mechanics of interviewing would be as uniform as possible; professional, so that the job in hand would be taken seriously, and not merely as a means of earning pin-money with a minimum of effort.

The interviewers used were obtained from a list provided by the National Opinion Research Center, a non-profit, non-commercial organization established at the University of Denver. The field workers used by this organization are carefully selected, individually and personally trained, and constantly refreshed in their technique, both by mail and by personal visits from supervisors. Many of them devote their full time to public opinion surveys. Some work for Elmo Roper's *Fortune* surveys, some for Princeton's Office of Public Opinion Research, as well as for the N. O. R. C. The fact that these people were accustomed to working for more than one organization was a definite advantage in this study.

All of the interviewers filled out the bottom part of the questionnaire sent to them, thus giving complete information as to their own estimations of their economic status, and their age, sex, and marital status. This is shown in Table I together with an indication of the sponsorship group into which each was placed. It will be

TABLE I  
INTERVIEWERS' DESCRIPTIONS OF THEMSELVES

<i>Inter- viewer's Number</i>	<i>City</i>	<i>Economic Status*</i>	<i>Age</i>	<i>Sex</i>	<i>Marital Status</i>	<i>Sponsor- ship Group†</i>
1	Augusta, Georgia	B	25	F	M	I
2	San Angelo, Texas	C	37	F	S	I
3	Muskogee, Oklahoma	B	27	F	S	I
4	Denver, Colorado	B	35	F	S	F
5	Dallas, Texas	C	31	F	M	F
6	Huntington, West Virginia	B	45	F	M	I
7	Milwaukee, Wisconsin	C	24	F	S	I
8	New Orleans, Louisiana	C	30	F	M	I
9	Denver, Colorado	C	41	F	M	F
10	Tulsa, Oklahoma	B	26	F	M	F
11	Pittsburgh, Pennsylvania	C	50	M	M	I
12	Columbia, South Carolina	B	45	F	M	I
13	Wichita, Kansas	C	33	F	M	F
14	New Orleans, Louisiana	B	31	F	M	I
15	Columbia, South Carolina	B	38	F	M	I
16	Peoria, Illinois	C	33	F	M	F
17	Kansas City, Missouri	B	27	F	M	F
18	Charlotte, North Carolina	B	38	F	M	F
19	Reading, Pennsylvania	B	35	F	M	F
20	Tulsa, Oklahoma	B	46	F	M	F
21	Pittsburgh, Pennsylvania	B	30	F	M	I
22	Wichita, Kansas	C	43	F	S	F

\* See Appendix.

† I indicates that the interviewer was told, immediately before the second survey, that the Ipana toothpaste people were sponsoring the dentifrice questions. Similarly, F stands for Forhan's.

noted that the group is almost evenly distributed in respect to economic status, 13 reporting themselves in the B group, and 9 in the C group. In their instructions they were told to obtain half of their interviews from respondents in each of these economic groups, thus leaving out of consideration the problem raised in Katz's (6) study where the interviewers were of a different economic level from the respondents. Furthermore, all but one of the interviewers were female, and thus no question as to sex differences between interviewers can be raised. All but five were married, and of these five at least one may have been a widow, divorced, or separated. (The interviewers' instructions on this point were to report as "single" any individual, married or not, who was not living with a spouse.)

Since part of the plan of this study involved misleading the interviewers to the extent of naming false sponsors, it is obvious that no existent commercial or research organization could have been named. Therefore, some neutral organization had to be set up, which could, conceivably, engage in commercial surveys. For



use in this work a business name and address were adopted and stationery was printed with the following:

HENRY BLAKE & ASSOCIATES  
AMERICAN SURVEYS  
15 Amsterdam Avenue<sup>1</sup>  
New York City

The National Opinion Research Center provided the names of 47 interviewers. A carefully mimeographed copy of the following letter, on letterhead, was sent to each person on the list.

May 1, 1942

Miss Jane Jones  
12 Third Avenue  
Tulsa, Oklahoma

Dear Miss Jones:

Through Mr. Harry Field of the National Opinion Research Center, of the University of Denver, I have learned that you are experienced at interviewing, and I would like to know if you can be available for a survey to be conducted during the week of May 11. Inasmuch as you will have to do only 30 interviews, taking about ten minutes each, your entire job should be completed in just a few hours.

Although you were recommended by Mr. Field, this survey is in no way connected with the National Opinion Research Center. The usual standards of the N. O. R. C. will, however, apply—except where specifically stated to the contrary. For your cooperation in this survey, you will be compensated at the usual N. O. R. C. rates—65¢ per hour and in the event that you need to travel, the cost of public transportation, or five cents per mile for your own car.

If you feel that references are needed, you are at liberty to check with Mr. Field or Mr. Williams at Denver, or Mr. Sheatsley at the New York office.

No hard-to-meet deadline will be set, so that you will be able to complete your quota in your most convenient time, within, of course, reasonable limits.

You will find enclosed, a sample of the questionnaire. If you are willing to undertake the work, will you please fill out your own answers to this questionnaire and mail it back to me, as soon as possible, in the enclosed stamped, self-addressed envelope? As soon as I get this from you, I shall send specifications and a supply of blank questionnaires.

I have no doubt that you will find it both pleasant and easy to work on this survey with us.

A sample copy of the questionnaire was included. Of the 47 individuals contacted, 28 immediately replied, indicating their willingness to do the work, and enclosing a copy of the questionnaire with their *own* answers. To these 28 were mailed envelopes containing:

<sup>1</sup> Thanks are due to Dr. Paul F. Lazarsfeld, for permission to use this address, that of the Columbia University Office of Radio Research, as a mailing address.

1. A stamped, addressed return envelope—(A rubber stamp bearing the name of the "organization" had been prepared for this purpose, in order to maintain the illusion of a large business firm.)
2. 35 copies of the questionnaire form—(numbered by machine for positive identification).
3. A time-and-expense report—(This was modelled after that used by the N. O. R. C. to simplify the interviewer's statement of his charges for the work. It provided for the name and address of the interviewer, a statement of the days actually spent on the survey, a breakdown of the hours required, and an indication of transportation charges.)
4. A quota sheet—(This also, was modelled after that used currently by the N. O. R. C. The policy of the Denver organization in regard to assignment of quotas permits almost complete control of the makeup of the groups of respondents. The instructions to interviewers contained on this sheet were that  $\frac{1}{2}$  of the 30 interviews required, should be obtained from respondents in the B socio-economic level and the remaining  $\frac{1}{2}$  in the C socio-economic level.<sup>2</sup>

In addition 20 of the respondents should be under 40 years of age, and 10 should be over 40 years of age. This particular proportion of ages was settled upon as being simplest for the interviewers to obtain. At any rate this proportion remained constant for all interviewers throughout the whole survey. Finally, instructions called for half of the respondents to be male, and half female. The quota sheet as designed, greatly simplified the interviewer's task in keeping a record of this three-way classification.)

5. A "specification" sheet—(again modelled after that used by the N. O. R. C.) This read as follows:

HENRY BLAKE & ASSOCIATES  
AMERICAN SURVEYS  
15 Amsterdam Avenue  
New York City

#### SPECIFICATIONS

You will find, in addition to this specification sheet, a supply of questionnaire forms (sufficient to complete your quota in the study which you agreed, earlier this week, to work on), a quota sheet, a time-and-expense report, and a stamped return envelope.

Since we have been assured of your competence as an interviewer, we would naturally expect that all of the interviews assigned to you be completed by you, yourself. We ask that you have your completed forms in the mail not later than Wednesday, May 20.

Throughout the survey, you should, of course, adhere to the N. O. R. C. standards, unless specifically stated to the contrary. For example, all questions should be put exactly as they are worded on the questionnaire, etc.

#### THE QUESTIONS

Question 1. If answers other than "yes" or "no" are given, record answer *briefly*.

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<sup>2</sup> The interviewers were instructed to follow the usual N. O. R. C. standards in respect to socio-economic classification. That organization's instructions on this point appear in full in the Appendix.

(If yes): If the respondent answered "yes" to the first part of the question, then ask "How often?" and write figure giving the number of times, *e.g.*, "Twice," write 2.

(If no): If the respondent answered "no" to the first part of the question, then ask the question as indicated on the form. DK in this question, as in the following ones, may mean either "Don't Know," or "No Opinion," or "Depends," depending upon which best suits the meaning of the answer. In other words, any answer other than "yes" or "no" should be recorded by a check mark in the space after DK.

- Question 2. Ask the question as it stands. If the answer is "yes" ask the question marked (If yes). On the other hand, if the respondent answered "no" (meaning that he does not enjoy war stories in the movies) then ask the part marked (If no).
- Question 3. This question is straightforward.
- Question 4. If there are any qualifying statements, record them briefly in the space following the answers.
- Question 5. Record in the space provided, the names of *all* dentifrices respondents report having seen advertised in magazines, newspapers, etc., or having heard advertised on the radio. If the respondent reports that he does not remember any dentifrice advertising, record *none* in the answer space.
- Question 6. If the respondent does not seem to understand the question as put, you may reword the question by asking "What dentifrice uses as its advertising slogan . . .?" If more than one name is given for a single slogan, record all of them. If you like, you may preface each part of Question 6 with, "Do you happen to know. . . ."
- Question 7. Write in the name of the brand, or brands, used. You may, if you prefer, begin this question, "Would you mind telling me. . . ."
- Question 8. Here too, write in the name of the brand or brands mentioned.

#### FACTUAL INFORMATION

The economic classifications, as indicated here, are to be considered in the same terms as those set down by the N. O. R. C., for instance, OR-wh means a white person on relief, Cl means a colored person, etc.

Estimate the age of the respondent as closely as possible, and write in the figure on the line under the phrase "Estimated age."

Check the respondent's sex and marital status.

Enter specific occupation on the lines provided; enter the place in which the interview was made according to community and state; finally enter your name or initials at the bottom of the page.

\* \* \* \* \*

If it is absolutely impossible for you to meet the May 20 deadline, please try to mail the questionnaires back as soon after that date as you can.

After a period of about two weeks 27 interviewers returned their assignments properly completed, while the remaining one was never



heard from again. The interviewers, it might be added, carried out their instructions to the letter with one minor exception.<sup>3</sup> When the completed assignment had been received, the following letter was sent to each interviewer:

(This letter was individually typed in order to encourage the belief that these extra interviews were on an individual basis, whereas, actually, an identical letter was sent to each interviewer who had cooperated up to this point.)

May 25, 1942

Miss Jane Jones  
12 Third Avenue  
Tulsa, Oklahoma

Dear Miss Jones:

Your completed questionnaires have been received and we are pleased to say that your work is entirely satisfactory.

After a conference with representatives of the XXXXX Toothpaste people, who are sponsoring the dentifrice questions, we have come to the conclusion that additional interviews are desirable. I, therefore, would like you to undertake an assignment similar to the previous one. You will find enclosed, another copy of the questionnaire. If you are able to accept the assignment, please fill it out and return it in the stamped self-addressed envelope, as soon as possible.

In the event that you are unable to accept this additional assignment, we shall send you the full amount asked for in your bill when you inform us to this effect. If, however, you are willing to cooperate with us further, payment will be made for both surveys as soon as we receive your second group of completed questionnaires (unless you request immediate payment for the work you have already done).

The XXXXX was filled in with "Ipana" in the case of 14 of the interviewers and "Forhan's" in the case of the other 13. (The twenty-eighth interviewer was to be classified as a "Forhan's" interviewer, but failed to complete the first survey.)

The decision as to which of the two sponsors was to be named for each interviewer was determined as follows: 2 of the interviewers reported using Forhan's toothpaste, while another 2 reported using Ipana. (The remaining 23 interviewers used some other dentifrice.) In order to provide a proper balance, one of the Ipana users was put in the Ipana-sponsored category, while the other Ipana user was put in the Forhan's group; similarly, one Forhan's user was put

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<sup>3</sup> One interviewer, Number 2, obtained only 21 interviews, while her sister did the other 9. For purposes of this study, the 9 done by the sister were discarded and the 21 were increased proportionately to 30. That is, if 7 ( $\frac{1}{3}$ ) of her respondents answered *Yes* to a question, this was recorded as 10 ( $\frac{1}{3}$  of 30) on the assumption that she would have reported essentially the same proportion of responses had she obtained more interviews.

in the Ipana-sponsored category, and the other Forhan's user, in the Forhan's group.

The next basis for grouping was the community in which the interviewers lived. In 9 instances 2 interviewers lived in the same community, and it was thought advisable to place each pair of interviewers in the same experimental group. This was done to maintain the confidence of the interviewers in the integrity of the organization, in the event that the 2 interviewers living in the same community were to meet, or to communicate with one another and discuss the survey on which they were working.

The third basis for grouping was that of sex, but inasmuch as in the group of 27 there were but 3 men, it was possible merely to arrange to have 2 men in the Ipana group, and one in the Forhan's group.

The fourth determining factor was that of age. For the Ipana group the range was 22 to 50, with a mean of 32.08; for the Forhan's group the range was 25 to 46, with a mean of 32.83.

Of the 27 interviewers, 5 were unable, or unwilling for various reasons, to undertake the second survey, but the other 22 answered favorably and sent in their own completed questionnaires. (By a stroke of fortune, exactly half of this group fell into each sponsorship group.) When the favorable replies were in, a second assignment was sent to each interviewer. This was identical in every respect with the first assignment, save that the specification sheet gave the deadline as June 15.

## CHAPTER III

### RESULTS

The hypothesis, in terms of which all of the following data were analyzed, assumes that interviewers in public opinion and market research surveys tend to bring in results which favor either their own personal biases or the bias of the organization by which they are employed. For the purposes of this study, an interviewer's personal bias is considered to be simply in the direction of his own answer to a particular item; thus, an interviewer who answers a question with "Yes" is called a "Yes interviewer." If the hypothesis is true "Yes interviewers" report more "Yes" answers than do "No interviewers." This treatment was applicable to Questions 1, 2, 3, 4, and 6. In the last-named, however, since it dealt with a matter of fact, rather than of opinion, the interviewer's bias was considered to be in the direction of the correctness or incorrectness of his response.

An interviewer who answered "Ipana" to the first slogan of Question 6 was considered a "Right interviewer." A response of either "Don't Know" or some other dentifrice name, caused the interviewer to be classified as either a "Don't Know—" or a "Wrong interviewer," respectively. Similar treatment was accorded, independently, to each of the other two parts of the question, with "Dr. Lyon's" being the correct answer for the second part of the question and "Forhan's" being the correct response for the third part.

The bias described above may be called "interviewer's personal bias" and has been assumed to manifest itself in public opinion polls.

In market research surveys the bias is assumed to change from one in which the interviewer brings back responses agreeing with his own opinion, to one in which the interviewer brings back results that tend to place his sponsor in a favorable light. Such a bias may be called "interviewer's sponsorship bias." (Both of these types are subsumed in "interviewer-effect" insofar as this study is concerned.)

The questions falling under this latter type of bias are 5, 6, 7, and 8. In this study two possible sponsorship biases were introduced: Ipana Toothpaste (contained in the instructions to 11 of the interviewers) and Forhan's Toothpaste (contained in the instructions for the remaining 11 interviewers.)



(Question 6, since it has the features of both types of survey, was treated in both ways. For the analysis presently under consideration, the answers to this question were considered not in terms of "Right" or "Wrong," but rather in terms of the sponsorship instructions given the interviewers.)

If this kind of interviewer-effect does play a part in such a survey, it would be expected that an interviewer with knowledge of his sponsor would report more responses favoring that sponsor than he would without knowledge of sponsorship. In these terms, the "Ipana" responses brought in on the first survey by the 11 interviewers, who, unknown to themselves were later to be Ipana-instructed, were compared with the "Ipana" responses brought in on the second survey by the same interviewers, who for that survey had such Ipana-instructions. A similar procedure was adopted for the Forhan's interviewers, and followed throughout the last four questions. (In Question 6, the only parts susceptible to this analysis were the first and third.)

The results of the tabulation of the data indicate that there was consistency throughout in respect to the proportions of responses obtained in the two surveys for a given question. In no case was the difference between corresponding items greater than 5.5%, with an average difference of about 2%. This overall picture of the two surveys, separately and combined, is presented in Table II.

Since the interviewers' own answers to all questions must be known in detail, a complete tabulation of each interviewer's responses to all "public opinion" type questions on both surveys was necessary. Such analysis shows that for the most part the interviewers were consistent in their responses. The greatest inconsistency was found in the answers to the three parts of Question 6 in which, either as a result of knowledge of the majority opinion ("climbing on the band-wagon"<sup>4</sup>) or because of additional information as to the correct answer (which may also be considered a "band-wagon effect"), the responses were changed. Of a total of 27 changes in the answers to Question 6, 19 were made from either a Don't Know, or a Wrong, to a Right response. The information concerning the interviewers' answers to Questions 1, 2, 3, 4, and 6 can be found in Table III. (Questions 5, 7, and 8 were designed to permit study of the effect of sponsorship-information, discussed later.)

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<sup>4</sup> This phrase is used in the public opinion field to refer to situations where individuals adopt as their own, the majority opinion on a question.

TABLE II  
RESPONDENT'S ANSWERS TO QUESTIONS 1, 2, 3, 4, AND 6

<i>Question</i>	<i>Number of Yes Responses</i>	<i>Percent of Yes Responses</i>	<i>Number of No Responses</i>	<i>Percent of No Responses</i>	<i>Number of DK Responses</i>	<i>Percent of DK Responses</i>
1—First Survey .....	226	34.24	434	65.76	.....	.....
1—Second Survey .....	262	39.70	398	60.30	.....	.....
Combined Surveys .....	488	36.97	832	63.03	.....	.....
2—First Survey .....	329	49.85	299	45.30	32	4.85
2—Second Survey .....	357	54.09	268	40.61	35	5.30
Combined Surveys .....	686	51.97	567	42.95	67	5.08
3a—First Survey .....	518	78.48	117	17.73	25	3.79
3a—Second Survey .....	545	82.58	103	15.61	12	1.82
Combined Surveys .....	1063	80.53	220	16.67	37	2.80
3b—First Survey .....	561	85.00	45	6.82	54	8.18
3b—Second Survey .....	560	84.85	45	6.82	55	8.33
Combined Surveys .....	1121	84.92	90	6.82	109	8.26
4—First Survey .....	525	79.55	73	11.06	62	9.39
4—Second Survey .....	527	79.85	50	7.58	83	12.57
Combined Surveys .....	1052	79.70	123	9.32	145	10.98
	<i>Number of Right Responses</i>	<i>Percent of Right Responses</i>	<i>Number of DK Responses</i>	<i>Percent of DK Responses</i>	<i>Number of Wrong Responses</i>	<i>Percent of Wrong Responses</i>
6a—First Survey .....	328	49.70	236	35.76	96	14.54
6a—Second Survey .....	330	50.00	238	36.06	92	13.94
Combined Surveys .....	658	49.85	474	35.91	188	14.24
6b—First Survey .....	237	35.91	342	51.82	81	12.27
6b—Second Survey .....	221	33.48	333	50.45	106	16.06
Combined Surveys .....	458	34.70	675	51.14	187	14.17
6c—First Survey .....	36	5.45	485	73.48	139	21.06
6c—Second Survey .....	38	5.76	478	72.42	144	21.82
Combined Surveys .....	74	5.61	963	72.95	283	21.44

The next step in the analysis is the breaking down of the respondents' answers according to the response of the interviewer, for each question individually. This is necessary to study the relationship between interviewers' and respondents' answers. In the first survey almost without exception the proportions of answers in any given category were constant regardless of the interviewers' response. Thus, an interviewer who answered "Yes" to a question got the same proportion of "Yes" and "No" responses as an interviewer who answered "No" to the same question.

In only two cases, Questions 6b and 6c, do the differences appear to be striking, but these differences can be attributed to the extreme

TABLE III  
INTERVIEWER'S RESPONSES TO THE QUESTIONS ON BOTH SURVEYS

Interviewer	Questions											
	1		2		3a		3b		4		6a	
	S u r v e y 1	S u r v e y 2	S u r v e y 1	S u r v e y 2	S u r v e y 1	S u r v e y 2	S u r v e y 1	S u r v e y 2	S u r v e y 1	S u r v e y 2	S u r v e y 1	S u r v e y 2
1	N	N	N	N	Y	Y	Y	Y	DK	Y	R	R
2	N	N	Y	Y	Y	Y	Y	Y	Y	Y	R	R
3	N	N	Y	Y	Y	Y	Y	Y	Y	Y	R	R
4	N	N	Y	Y	Y	Y	Y	Y	Y	Y	R	R
5	N	N	Y	Y	Y	Y	Y	Y	Y	Y	DK	DK
6	N	N	Y	Y	Y	Y	Y	Y	DK	DK	R	R
7	N	N	Y	Y	Y	Y	Y	Y	Y	Y	R	R
8	N	N	Y	Y	N	N	Y	Y	Y	Y	R	R
9	N	N	Y	Y	N	N	Y	Y	Y	Y	R	R
10	N	N	Y	Y	Y	Y	Y	Y	Y	Y	R	R
11	N	N	Y	Y	Y	Y	Y	Y	Y	Y	DK	DK
12	N	N	Y	Y	Y	Y	Y	Y	Y	Y	DK	DK
13	N	N	Y	Y	Y	Y	Y	Y	Y	Y	DK	DK
14	N	N	Y	Y	Y	Y	Y	Y	Y	Y	DK	DK
15	N	N	Y	Y	Y	Y	Y	Y	Y	Y	W	W
16	N	N	Y	Y	N	N	Y	Y	DK	Y	W	W
17	N	N	Y	Y	Y	Y	Y	Y	Y	Y	DK	DK
18	N	N	Y	Y	Y	Y	Y	Y	Y	Y	R	R
19	N	N	Y	Y	Y	Y	Y	Y	Y	Y	W	W
20	N	N	Y	Y	Y	Y	Y	Y	Y	Y	DK	DK
21	N	N	Y	Y	Y	Y	Y	Y	Y	Y	W	W
22	N	N	Y	Y	Y	Y	Y	Y	Y	Y	DK	DK

Y = Yes, N = No, DK = Don't Know, R = Right, W = Wrong. Italics indicate the cases where the answer to a question on the Second Survey differed from that on the First Survey.



disparity of the "n's" involved, 13 compared to 1, in one case, and 9 to 1 in the other.

In the second survey, however, we find again two differences, Questions 1 and 2, that are large. But in Question 1 a more careful scrutiny of the original data reveals that the major contribution to the mean of one of the members of the comparison was made by two individual interviewers whose reported "Yes" responses were greatly in excess of the average of the group. In the other case we find an extreme disparity between "n's," viz., 20 and 2. These data can be found in Tables IV and V.

TABLE IV  
RESPONSES BROKEN DOWN ACCORDING TO INTERVIEWER'S RESPONSES  
ON THE FIRST SURVEY

Question	Inter- viewers' Response	Number of Inter- viewers	Number of Respondents Answering					
			Number		Percent		Number	
			Yes		No		DK	
1.	Yes	5	51	34.00	99	66.00	.....	.....
	No	17	175	34.31	335	65.69	.....	.....
2.	Yes	12	189	52.50	154	42.78	17	4.72
	No	9	129	47.78	126	46.67	15	5.55
	DK	1	11	36.67	19	63.33	0	0.00
3a.	Yes	19	448	78.60	101	17.72	21	3.68
	No	3	70	77.78	16	17.78	4	4.44
	DK	0						
3b.	Yes	21	538	85.40	40	6.35	52	8.25
	No	1	23	76.67	5	16.67	2	6.67
	DK	0						
4.	Yes	17	404	79.22	56	10.98	50	9.80
	No	1	25	83.33	2	6.67	3	10.00
	DK	4	96	80.00	15	12.50	9	7.50
			Right		Wrong		DK	
6a.	Right	15	240	53.33	60	13.33	150	33.33
	Wrong	1	20	66.67	2	6.67	8	26.67
	DK	6	68	37.78	34	18.89	78	43.33
6b.	Right	13	172	44.10	34	8.72	184	47.18
	Wrong	1	8	26.67	4	13.33	18	60.00
	DK	8	57	23.75	43	17.92	140	58.33
6c.	Right	1	5	16.67	3	10.00	22	73.33
	Wrong	9	13	4.82	64	23.70	193	71.48
	DK	12	18	5.00	72	20.00	270	75.00

In the sponsorship-bias phase of the study a somewhat different problem is encountered. Rather than being interested in the effect of an interviewer's opinion on the results returned, the interest

TABLE V  
RESPONSES BROKEN DOWN ACCORDING TO INTERVIEWER'S RESPONSES  
ON THE SECOND SURVEY

Question	Inter- viewers' Response	Number of Inter- viewers	Number of Respondents Answering					
			Number		Percent		Number	
			Yes		No		DK	
1.	Yes	7	106	50.48	104	49.52	.....	.....
	No	15	156	34.67	294	65.33	.....	.....
2.	Yes	8	139	57.92	91	37.92	10	4.16
	No	13	207	53.08	165	42.31	18	4.61
	DK	1	11	36.67	12	40.00	7	23.33
3a.	Yes	20	502	83.67	86	14.33	12	2.00
	No	2	43	71.67	17	28.33	0	0.00
	DK	0						
3b.	Yes	21	537	85.24	42	6.67	51	8.09
	No	1	23	76.67	3	10.00	4	13.33
	DK	0						
4.	Yes	19	464	81.40	35	6.14	71	12.46
	No	2	45	75.00	6	10.00	9	15.00
	DK	1	18	60.00	9	30.00	3	10.00
			Right		Wrong		DK	
6a.	Right	21	318	50.48	85	13.49	227	36.03
	Wrong	1	12	40.00	7	23.33	11	36.67
	DK	0						
6b.	Right	19	195	34.21	82	14.39	293	51.40
	Wrong	1	11	36.67	7	23.33	12	40.00
	DK	2	15	25.00	17	28.33	28	46.67
6c.	Right	7	21	10.00	35	16.67	154	73.33
	Wrong	5	5	3.33	44	29.33	101	67.33
	DK	10	12	4.00	65	21.67	223	74.33

becomes centered on the relative effects of varying sponsorship knowledge on the reported responses for the second survey. This can best be determined by a comparison of the responses "Ipana" (or "Forhan's") brought back by "Ipana-" (or "Forhan's-") interviewers on the two surveys. For example, in Question 5 the eleven interviewers who, on the second survey were told that the Ipana people were sponsoring the dentifrice questions reported 124 Ipana responses in the first survey, when they had no sponsorship instructions, as compared with 120 Ipana mentions on the second survey. This difference is obviously not significant. Similarly, in the case of Forhan's, we find that there are 7 Forhan's mentions in the first survey, as compared with 12 in the second survey. A similar procedure was followed for Questions 7 and 8 with no comparison more striking than the ones indicated above. This informa-

TABLE VI

NUMBER OF TIMES EACH PRODUCT WAS MENTIONED IN REPLY TO QUESTIONS  
5, 7, 8—ACCORDING TO SPONSORSHIP INSTRUCTIONS TO  
INTERVIEWERS ON THE SECOND SURVEY

<i>Dentifrice</i>	<i>First Survey</i>		<i>Second Survey</i>	
	<i>Ipana Interviewers</i>	<i>Forhan's Interviewers</i>	<i>Ipana Interviewers</i>	<i>Forhan's Interviewers</i>
<b>Question 5</b>				
Ipana .....	124	90	120	83
Forhan's .....	3	7	2	12
Dr. Lyons .....	66	33	48	45
Pepsodent .....	143	173	149	145
Colgate's .....	56	63	60	61
Teel .....	18	31	21	26
Calox .....	2	9	7	7
Listerine .....	4	9	17	13
Squibb's .....	5	7	5	6
Phillip's .....	12	2	7	4
Kolynos .....	5	10	6	2
Others .....	10	20	15	26
None .....	45	79	64	68
D.K. ....	19	9	4	11
<b>Question 7</b>				
Ipana .....	73	37	85	38
Forhan's .....	5	6	2	8
Dr. Lyons .....	28	23	41	31
Pepsodent .....	56	69	48	63
Colgate's .....	42	38	44	45
Phillip's .....	10	5	8	4
Teel .....	9	8	6	20
Listerine .....	7	7	10	11
Kolynos .....	2	5	1	4
Squibb's .....	8	18	5	11
Dr. West's .....	0	7	1	9
Calox .....	11	22	20	18
Others .....	41	42	32	44
None .....	27	42	24	44
D.K. ....	9	6	15	19
<b>Question 8</b>				
Ipana .....	61	44	55	35
Forhan's .....	2	2	3	6
Dr. Lyons .....	29	28	29	21
Pepsodent .....	48	48	53	67
Colgate's .....	37	40	43	41
Teel .....	11	16	3	5
Calox .....	10	4	5	8
Listerine .....	5	11	16	4
Squibb's .....	6	7	7	7
Phillip's .....	5	7	2	7
Dr. West's .....	1	6	6	8
Pebeco .....	5	3	4	2
Others .....	25	10	14	20
None .....	33	40	26	33
D.K. ....	43	62	69	62



tion, together with a complete tabulation of the dentifrices named in this study are included in Table VI.

There a separate tabulation is presented for all dentifrices which are mentioned at least 5 times on each survey, or failing that, at least ten times in one of the surveys. The "others" category includes all dental products which were mentioned so infrequently as to fail in satisfying these requirements. The "none" category includes actual responses of "no dentifrice," as well as "salt," "salt and soda," "soap," etc., in addition to specialized products made for false teeth. Since the nature of these questions was such that the respondent was required to answer with one (or more) brand name(s), the total number of responses indicated for any given question may be different from the total number of respondents.

For the verification of the hypothesis it was necessary to obtain estimates of the significance of the differences in three different situations. They were:

1. Differences between "Yes" responses of "Yes-interviewers" and "Yes" responses of "No-interviewers."
2. Differences between "Right" responses of "Right-interviewers" and "Right" responses of "Wrong-interviewers."
3. Differences between "Ipana" responses brought in by "Ipana-interviewers" on the first survey and "Ipana" responses brought in by "Ipana-interviewers" on the second survey.

Differences between "Forhan's" responses brought in by "Forhan's-interviewers" on the first survey and "Forhan's" responses brought in by "Forhan's-interviewers" on the second survey.

The "t" test was used for the determination.<sup>5</sup> The results of the application of this test are given in Table VII. In all cases but 2 the differences are not significant, virtually all of the "t's" failing to meet even the 10% level.

In one case, Question 3a on the second survey, the difference is apparently significant at the 3% level. Little faith, however, can be had in the "t" test in this instance, since, as was pointed out above, one of the groups whose means were compared consisted of only 2 interviewers. In the other case, Question 1 on the second survey, the difference is significant at about the 1% level. Notwithstanding this "t" value, a question may again be raised as to its

<sup>5</sup> Cf. Fisher, R. A.: *Statistical Methods for Research Workers*. Edinburgh and London: Oliver and Boyd, 1936. Chapter V.

TABLE VII  
SHOWING SIGNIFICANCE OF DIFFERENCES BETWEEN ITEMS

Question	First Survey				Second Survey					
	Yes Responses of Yes- Interviewers	Yes Responses of No- Interviewers	t	D.F.	P	Yes Responses of Yes- Interviewers	Yes Responses of No- Interviewers	t	D.F.	P
1	51 *N = 5	175 N = 17	.044	21	> .90	106 N = 7	156 N = 15	2.709	21	> .01
2	189 N = 12	129 N = 9	.888	20	> .30	142 N = 8	207 N = 13	.907	20	> .30
3a	448 N = 19	70 N = 3	.159	21	> .80	502 N = 20	43 N = 2	2.236	21	> .03
3b	538 N = 21	23 N = 1	1.560	21	> .10	537 N = 21	23 N = 1	1.279	21	> .20
4	404 N = 17	25 N = 1	.549	17	> .60	464 N = 19	45 N = 2	.932	20	> .30
	Right Responses of Right- Interviewers	Right Responses of Wrong- Interviewers	t	D.F.	P	Right Responses of Right- Interviewers	Right Responses of Wrong- Interviewers	t	D.F.	P
6a	240 N = 15	20 N = 1	1.754	15	.10	318 N = 21	12 N = 1	.946	21	> .30
6b	172 N = 13	8 N = 1	1.829	13	< .10	195 N = 19	11 N = 1	.193	19	< .10
6c	5 N = 1	13 N = 9	2.011	9	> .05	21 N = 7	5 N = 5	1.493	11	> .10
	Ipapa Responses of Ipapa- Interviewers	Ipapa Responses of Ipapa- Interviewers	t	D.F.	P	Forhan's Responses of Forhan's- Interviewers	Forhan's Responses of Forhan's- Interviewers	t	D.F.	P
	First Survey	Second Survey				First Survey	Second Survey			
5	124 N = 11	120 N = 11	.203	21	> .80	7 N = 11	12 N = 11	.937	21	> .30
6a	181 N = 11	191 N = 11	.289	21	> .80	23 N = 11	24 N = 11	.157	21	> .10
7	73 N = 11	85 N = 11	1.514	21	> .10	6 N = 11	8 N = 11	.559	21	> .50
8	61 N = 11	55 N = 11	.902	21	> .30	2 N = 11	6 N = 11	1.286	21	> .20

\* N refers to the number of interviewers who obtained the responses indicated.

interpretation as a statistic, bearing in mind the fact that the size of the mean is largely a result of the responses obtained by only two interviewers whose reported "Yes" responses were greatly in excess of the average reported by all the "Yes-interviewers."

These isolated instances do not vitiate the conclusion that no interviewer-effect is apparent in this study.

Although no interviewer-effect was found upon individual treatment of the questions, there was the possibility that some over-all effect might be found in which those interviewers whose opinions were those of the majority, brought back more majority responses than did those interviewers whose opinions coincided with the minority. With this in mind, the majority responses reported by interviewers who held majority opinions were compared with the majority responses reported by interviewers who themselves held minority opinions, after lumping all of the public opinion type questions. This treatment did not indicate any significant differences and in no way altered conclusions otherwise derived.



## CHAPTER IV

### SUMMARY AND CONCLUSIONS

Twenty-two interviewers obtained 660<sup>6</sup> interviews on each of two surveys. The first survey was completed without information as to the sponsor. The second survey was made after the interviewers had been supplied with (false) information concerning the sponsorship of certain of the questions. Before each survey was started, the interviewers reported their own opinions and answers to each question.

It was found that neither opinions on questions nor knowledge of sponsorship affected the results in this survey. The differences in the results brought back by interviewers of different opinions, and between interviewers with different knowledge of sponsorship were not, on the whole, significant. The test of significance used, "t," indicated that the differences that were found could very well be accounted for on a chance basis and therefore they cannot be said to support the hypothesis of interviewer-effect.

It would seem, then, that the conclusion reached here is counter to the common belief that interviewers almost invariably affect their data in ways favorable to the opinions they themselves hold, or feel they ought to hold in deference to the individuals or organizations sponsoring the study. This belief is so widespread that many public opinion and market research directors take steps to minimize the opportunity for the effect to occur.

The only previously published field study in favor of the belief is the study by Katz (6) in which it was shown that the social status of the interviewer was associated with the results brought back. In analyzing his results it appears that much of the difference could be ascribed to selection of respondents (a problem that did not enter the present study). Some of the differences in Katz's work can be traced back to different attitudes associated with the different social classes. Again, this factor was controlled in this study in order to investigate interviewer-effect in a broader sense. It is apparent that in this study where the interviewers were of the same socio-economic class as the respondents (in contrast with Katz's), the effect was not found. To do away with interviewer-effect, therefore, one of the requirements would seem to be that of using interviewers who are homogeneous with respect to the individuals they are to interview.

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<sup>6</sup> Please see footnote on page 19.

Other evidence favoring the belief in the existence of the interviewer-effect comes from studies such as those done by Stanton and Baker (9) and the one analyzed by Rice (8). In these cases a few "trained" interviewers discussed at some length certain problems or experiences with individuals seated at the other side of a table. Under these conditions the interviewer-effect was found. But this conclusion, limited to a laboratory study, does not conflict with the present research, done as it was by a greater number of interviewers going from door to door and asking brief questions which could be answered with a single word, or little more. The present study bears more resemblance to public opinion polls and market research surveys than do the laboratory interview studies, and indeed, the investigators in the latter studies do not attempt to generalize their findings to include the door-to-door survey.

In this study the interviewers were thoroughly trained in the best-known techniques of interviewing. Before being placed on the staff of the organization which had provided their names, the interviewers were required to read a comprehensive manual describing the public opinion process and the best methods of handling the exacting task of interviewing. In addition, the interviewers were individually trained by supervisors, and were constantly being refreshed and brought up to date by pamphlets which were mailed to them regularly. There is general agreement that the interviewers used are among the best in the country.

A limitation of this study is the probable fact that there was but little personal involvement of the interviewers in the questions. (It is unfortunate that in some questions there was an unequal division of opinion among the interviewers, resulting in a comparison of a large group with a small group.) While it is true that the interviewers had opinions on the various questions, and that they knew who the "sponsor" was, there is no evidence to show that they regarded the questions as important, or that the sponsor was of great significance to them. It remains for further studies to show whether questions with greater personal involvement will result in an interviewer-effect. It will probably take much experimentation to find where the dividing line lies between involvement-producing-interviewer-effect and less-involvement-resulting-in-no-interviewer-effect.

Similarly it remains for other studies to determine the kind of training and the minimum amount of training needed to result in a poll free from interviewer-effect. A subject for further investiga-

tion is consideration of the possibility of an interviewer-effect that brings about results which are counter to the opinions of the interviewers. And, of course left entirely to other studies, is the question of selection-bias. The conclusion from this study is considered to be limited to the demonstration that, contrary to popular belief, it is possible to conduct a poll or survey in which the interviewer-effect is not an important uncontrolled variable.

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## APPENDIX

The National Opinion Research Center issues basic instructions for interviewers which deal with almost all phases of the interviewing process. The instructions regarding economic classification stress the fact that an individual's standard of living is not necessarily determined by his own income or earning power alone, but rather by the total income of the family of which he is a member, by the size of the family, and by the community in which he lives. Therefore, the N. O. R. C. does not use income level alone to designate the standard of living, but instead uses economic groups. These groups are defined as follows:

*The A Group* is composed of the wealthy and prosperous families in the community. These people have *all* the comforts and necessities that money can buy, and most or all of the luxuries common to the community. (The word "luxuries" should *not* be interpreted in too rare a sense. They are not restricted in our definition to a yacht, or a stable of horses, or a hunting preserve, etc. We mean families able to afford some of the following things (or similar things): a servant or servants, membership in the country club, a second house at the shore, on the lake, or in the mountains, a trip to Florida or Canada in season, etc.) The *A's* run from millionaires down to anyone with sufficient income to afford any reasonable luxury sometimes enjoyed in his part of the country. Depending on the community, these constitute from 4 to 8% of the population.

*Class B* is the next lower group. Like the *A's*, these families have all the comforts and necessities. They differ from the *A's* in that they have to pick and choose between the luxuries. In other words, if a luxury runs into considerable money, they have to weigh one luxury against another. The *B* group typically constitutes from 20 to 25% of the community.

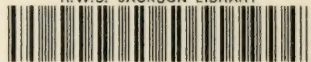
*The C's* are the great middle class. These people have all of the necessities of life and most of the comforts, but typically they are *not* able to afford luxuries. Some *C's* occasionally save enough to reach up for a few simple luxuries. The *C's* represent from 45 to 50% of the population.

*The D Group* is composed of poor people. Often they have irregular employment, or if regular, their wages are at the bottom of the scale. They cannot afford many of the comforts, or even necessities, of life. On many surveys part of your *D* quota will be composed of those "On Relief." This means people on home relief,

W. P. A. projects (not supervisory jobs, however), and those receiving old age benefits. The *D*'s then, scale from those who can obtain some of the necessities of life with a struggle on down to "reliefers." *D*'s constitute 20 to 25% of the population.

*The C1 Group* represents colored people (negroes). Only classify them as such. Do not designate them economically.

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